

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-2, 4-18 and 22-24 are presently active in this case, Claim 1 amended by way of the present Amendment.

In the outstanding Office Action, Claims 1-2, 4-10 and 22-24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,007,355 to Shibata et al. in view of U.S. Patent No. 5,310,356 to Obata et al.

Turning now to the merits, in order to expedite issuance of a patent in this case, Applicants have amended independent Claim 1 to clarify the patentable features of the present invention over the cited references. Specifically, Applicants' Claim 1, as amended, recites a rotary connector having a first part and a second part rotationally coupled to the first part to form an interior of the rotary connector. Also recited is a first flat cable having a single ribbon conductor which has a relatively large width for providing input and output high current, and a second flat cable for providing separate current sources to the rotary connector. The second flat cable has multiple conductor wires wherein the first and second flat cables are wholly housed within the interior of the rotary connector and each of the first and second flat cables extend in a circumferential direction about an axis of rotation of the rotary connector. Further recited in Claim 1 is an overcurrent protection device housed within an integral space of the rotary connector and configured to provide overcurrent protection for at least one of the first and second flat cables.

Thus, Applicants have amended Claim 1 to clarify that the first and second flat cables are *wholly housed within the interior of the rotary connector*. Support for this limitation is provided at least by Figures 3 and 11 and portions of the specification relating thereto. Therefore, the amendment to Claim 1 does not raise an issue of new matter.

The cited reference to Shibata et al. discloses a rotary connector having an improved connection point at the junction of an outer cable leading to the connector and an inner cable that is wrapped in a circumferential direction within the connector. As seen in Figure 4 of Shibata et al., an outer cable 5 leads to a junction point 11, which in turn connects to a flat cable 4 that is wound around the rotary connector interior. Thus, the outer cable 5 (cited by the Office Action as the second cable) is primarily provided exterior to the connector housing 2 with only a small end portion provided within the connector 2 joined to the junction point 11. Thus, Shibata et al. does not disclose that the first and second flat cables (each conducting) are *wholly* housed within the interior of the rotary connector as required by amended Claim 1. The cited reference to Obata et al. does not correct this deficiency. Specifically, Obata discloses a flexible flat conductor cable 11 and 3 dummy cables 21A, B and C provided within a housing. Thus, Obata et al. does not provide first and second conductors wholly housed within the connector housing.

Moreover, Claim 1 recites that the first flat cable has a single ribbon conductor, while the second flat cable provides separate current sources to the rotary connector. In contrast, the outer conductor 5 and flat cable 4 of Shibata et al. each include multiple conductors. As noted above, the cited reference to Obata et al. discloses a flexible flat conductor cable 11 and 3 dummy cables 21A, B and C provided within a housing. Thus, Obata also does not show first and second conductors the first conductor being a single ribbon conductor and the second conductor including multiple conductor wires. In this regard, Applicants note that the outstanding Office Action does not provide any explanation for reading the outer conductor 5 and flat cable 4 of Shibata as the first and second cables of Applicants' Claim 1.

As discussed above, even if Shibata et al. and Obata et al. are combined, these references do not disclose the above-noted limitation of Applicants' Claim 1.

Finally, the outstanding Office Action acknowledges that Shibata et al. does not disclose the outer conductor 5 extending in the circumferential direction about an axis of rotation of the rotary connector, but cites Obata as correcting this deficiency. However, as noted above, the outer conductor 5 in Shibata is intended to be an external conductor, and not housed within the connector cavity. Thus, using an interior flat cable 21 of Obata to replace the outer conductor 5 of Shibata would be contrary to the purpose of the outer conductor 5 as disclosed in Shibata. Thus, Applicants submit that there is no motivation to combine Obata and Shibata to arrive at the present invention. This provides an additional basis for patentability of Claim 1 over the cited references.

For the reasons discussed above, Applicants' independent Claim 1 patentably defines over the cited references. Moreover, as Claims 2, 4-16 and 22-24 depend from Claim 1, these claims also patentably define over the cited references.

Consequently, in view of the present Amendment, no further issues are believed to be outstanding in the present application. The present application is believed to be in condition for formal allowance. An early and favorable action is therefore respectfully requested.

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